Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A modular platform cooling apparatus, comprising:

at least one plenum associated with the apparatus; and

a first and a second fan module arranged in a side by side relationship configured to removably and independently engage the plenum, each having first and second spaced apart side panels, and each being designed to direct an airflow through a bottom of the first and second fan modules and out a respective rear portion of the first and second fan modules, and each including a plurality of fans arranged in a matrix array of 2xN fans positioned in a N-across by N-deep in-plane relationship wherein N fans are positioned substantially behind N other of the 2xN fans, where N is an integer equal to or greater than 2; and

first and second support members each coupled at opposite ends thereof to the respective first and second side panels wherein the first support member is adapted to support the N fans positioned substantially behind the N other of the 2xN fans, and the second support member is adapted to support the other of the 2xN fans.

2. (Cancelled).

3. (Currently amended) The modular platform cooling apparatus of Claim 1 ~~2~~, wherein at least one of the first and second fan modules includes a matrix array of four fans wherein N = 2.

4. (Previously amended) The modular platform cooling apparatus of Claim 1, wherein at least one of the first and second fan modules has six fans positioned in a 3-across by 2-deep in-plane relationship.

5. (Previously amended) The modular platform cooling apparatus of Claim 1, wherein the fans have a center hub of a certain diameter and the fans positioned in the 2-deep relationship are separated by a distance that is proportional to and a function of the diameter of the hub.

6. (Previously amended) The modular platform cooling apparatus of Claim 1, wherein at least one of the first and second fan modules may be removed from the at least one plenum while the other fan module continues to provide airflow through a modular platform.

7. (Original) The modular platform cooling apparatus of Claim 6 wherein the apparatus further comprises circuitry designed to allow the second fan module to be removably added to the apparatus while the apparatus, including the first fan module, is in operation.

8. (Original) The modular platform cooling apparatus of Claim 6, wherein the first fan module is designed to provide sufficient airflow capacity to cool (y/x)m modular platform boards at a specified capacity, where y equals the total number of side-by-side fans in the first fan module and x equals the total number of fans positioned side by side across an aggregate width of the modular platform, and m equals the total number of modular platform boards.

9. (Original) The modular platform cooling apparatus of Claim 8, wherein the first fan module will continue to provide airflow through the modular platform to support m

modular platform boards and a capacity greater than 50% when the second fan module has been removed from the plenum.

10. (Original) The modular platform cooling apparatus of Claim 1, wherein the first and the second fan modules, when operating in conjunction with the other, are designed to provide sufficient airflow to cool 2m modular platform boards, where m equals the total number of modular platform boards.

11. (Cancelled)

12. (Previously presented) The modular platform cooling apparatus of Claim 1, wherein a width dimension requirement for the at least one plenum is less than or equal to 440 mm, and wherein the aggregate width of the first fan module and the second fan module is less than or equal to 440 mm.

13. (Previously presented) The modular platform cooling apparatus of Claim 1, wherein the modular platform maintains a less than or equal to 10-degrees Celsius temperature increase per modular platform board, where each modular platform board can generate up to 200 Watts.

14. (Previously presented) The modular platform cooling apparatus of Claim 13, wherein the modular platform has up to sixteen modular platform boards and the first fan module and the second fan module provide enough airflow to keep the temperature increase across any modular platform board to less than or equal to 10 degrees Celsius.

15 . (Currently amended) A modular platform, comprising:

a plurality of modular platform boards;

at least one plenum coupled to the modular platform; and

a first and a second fan module arranged in a side by side relationship configured to removably and independently engage the plenum, each having first and second spaced apart side panels, and each being designed to direct an airflow through a bottom of the first and second fan modules and out a respective rear portion of the first and second fan modules, and each including a plurality of fans arranged in a matrix array of 2xN fans positioned in a N-across by N-deep in-plane relationship wherein N fans are positioned substantially behind N other of the 2xN fans, where N is an integer equal to or greater than 2; and

first and second support members each coupled at opposite ends thereof to the respective first and second side panels wherein the first support member is adapted to support the N fans positioned substantially behind the N other of the 2xN fans, and the second support member is adapted to support the other of the 2xN fans.

16. (Cancelled)

17. (Currently amended) The modular platform of Claim 15 ~~16~~, wherein at least one of the first and second fan modules includes a matrix array of four fans wherein N = 2.

18. (Previously amended) The modular platform of Claim 15, wherein at least one of the first and second fan modules has six fans positioned in a 3-across by 2-deep in-plane relationship.

19. (Previously amended) The modular platform of Claim 15, wherein the fans have a center hub of a certain diameter and the fans positioned in the 2-deep relationship are separated by a distance that is proportional to and a function of the diameter of the hub.

20. (Previously amended) The modular platform of Claim 15, wherein at least one of the first and second fan modules may be removed from the at least one plenum while the other fan module continues to provide airflow through the modular platform.

21. (Original) The modular platform of Claim 20, wherein the modular platform further comprises circuitry designed to allow the second fan module to be removably added to the apparatus while the modular platform, including the first fan module, is in operation.

22. (Original) The modular platform of Claim 20, wherein the first fan module is designed to provide sufficient airflow capacity to cool (y/x)m modular platform boards at a specified capacity, where y equals the total number of side-by-side fans in the first fan module and x equals the total number of fans positioned side-by-side across an aggregate width of the modular platform, and m equals the total number of modular platform boards.

23. (Original) The modular platform of Claim 22, wherein the first fan module will continue to provide airflow through the modular platform to support m modular platform boards and a capacity greater than 50% when the second fan module has been removed from the plenum.

24. (Previously amended) The modular platform of Claim 15, wherein the first and the second fan modules, when operating in conjunction with the other, are designed to provide sufficient airflow to cool 2m modular platform boards, m equals the total number of modular platform boards.

25. (Cancelled)

26. (Previously presented) The modular platform of Claim 15, wherein a width dimension requirement for the at least one plenum is less than or equal to 440 mm, and wherein the aggregate width of the first fan module and the second fan module is less than or equal to 440 mm.

27. (Previously presented) The modular platform of Claim 15, wherein the modular platform maintains a less than or equal to 10-degrees Celsius temperature increase per modular platform board, where the modular platform board can generate in excess of 200 Watts.

28. (Previously presented) The modular platform of Claim 27, wherein the modular platform has up to sixteen modular platform boards and the first fan module and the second fan module provide enough airflow to keep the temperature increase across any modular platform board to less than or equal to 10 degrees Celsius.

29. (Previously amended) The modular platform of Claim 15, wherein the modular platform includes an intake plenum and an exhaust plenum.

30. (Original) The modular platform of Claim 29, wherein the first and second fan modules are positioned in the exhaust plenum.

31. (Previously amended) The modular platform of Claim 15, wherein the first and second fan modules are configured as dual plenum fan modules, having a first portion acting as an intake for an adjacent modular platform and a second portion acting as an exhaust for the modular platform.

32. (Original) The modular platform of Claim 31, wherein the height of the first and second fan modules is less than or equal to 2U.

33. (Previously presented) The modular platform cooling apparatus of claim 1 wherein the first fan module has a first number of fans and the second fan module has second number of fans, the first number is different from the second number.

34. (Previously presented) The modular platform of claim 15 wherein the first fan module has a first number of fans and the second fan module has second number of fans, the first number is different from the second number.